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Basal Canker of White Pines

Young white pine trees sometimes suffer from a girdling at the base of the trunk which stops the free flow of sap and thus affects the growth of the top so that the whole foliage crown is short and stunted and the tree assumes a sickly, yellowish color. In such cases one may find a point of injury near the ground where the bark is sunken and black and which when cut into, shows brown dead tissue instead of the normal greenish yellow of living bark. In this depressed cankered area there often occur numerous minute dark pimples which are evidence of the presence of a fungus usually associated with these canker areas and often regarded as their cause.

However, owing to the fact that pines girdled in this manner are almost invariably found close to ant hills, there is strong suspicion that the ants have something to do with the girdling and that the fungus may be merely a secondary parasite entering the bark after it was already dead or dying.

In any case the presence of a few such girdled trees in a white pine seedling plantation is not a cause for alarm since this trouble has never been found on more than a few trees in any locality. Moreover, the disease is of a type which is not likely to spread to other trees and the worst cases seen have remained confined to the few original trees affected. No control measures are known and in view of the small percentage of loss it is doubtful if any method of control would be necessary or profitable in the majority of cases.

This basal canker of white pines may be mistaken for the effect of white pine blister rust. It is true that the blister rust disease occurs not infrequently at the base of the trunks of small trees and since it also produces a girdling effect a blister rust canker at this point may bring about a yellowing and stunting of the whole top. A blister rust canker, however, is always surrounded by a zone of bark distinctive because of its evident light yellowish color. This zone is absent in the basal canker trouble.

In some cases also young pines suffering from root trouble lose so much of their root system and particularly the finer roots, that they are compelled to go through the season under conditions of partial drought. While no injury is to be found on the trunk or main roots of such trees, the lowered power of absorption results in short shoot growth, short and tufted needles and a lighter color in the foliage. On these trees, one often notes sunscald in the leaves which is characterized by a browning and dying of the terminal portions of the needles more or less uniformly over the tree.

All the troubles above described have as a common symptom some unhealthy condition of the whole top, a condition which points at once to trunk or root injury. When single branches or small twigs have an unhealthy color one may look for the seat of injury on the main stem of the discolored limb just where it joins still healthy branches. Blister rust cankers often occur in this way.